CLAIMS

1. A sensitivity enhancement apparatus for chaos theoretical diagnosis used as a preprocessing apparatus to be connected to a chaos theoretical voice diagnosis apparatus for analyzing voice uttered by an utterer by using a chaos theory technique, calculating a Lyapunov exponent, and measuring and evaluating a change state of the calculated Lyapunov exponent, comprising:

a voice input apparatus for acquiring the uttered voice;

an analog-digital conversion apparatus for converting the uttered voice acquired by the voice input apparatus to digital voice data;

a comparator for selecting voice data having a level which is equal to or higher than a certain level, from the digital voice data converted by the analog-digital conversion apparatus and outputting the voice data thus selected;

a voice data cutout apparatus capable of cutting out voice data having a level which is equal to or higher than a certain level output from the comparator, while taking a phoneme as unit; and

a voice data output apparatus for outputting voice data of phoneme unit output from the voice data cutout apparatus.

2. The sensitivity enhancement apparatus for chaos theoretical diagnosis according to claim 1,

an internal memory for storing the voice data output from the comparator;

a phoneme database for storing phoneme data to be collated with the voice data stored in the internal memory; and

a phoneme collation apparatus for cutting out and outputting only a phoneme that coincides with the phoneme data in the phoneme database from the voice data of an internal memory;

are connected between the comparator and the voice data cutout apparatus.

3. The sensitivity enhancement apparatus for chaos theoretical diagnosis according to claim 1,

an internal memory for storing the voice data output from the comparator;

a phoneme sequence database for storing phoneme sequence data to be collated with the voice data stored in the internal memory; and

a phoneme sequence collation apparatus for cutting out and outputting only a phoneme sequence that coincides with the phoneme sequence data in the phoneme sequence database from the voice data of an internal memory;

are connected between the comparator and the voice data cutout apparatus.

4. The sensitivity enhancement apparatus for chaos theoretical diagnosis according to claim 1, wherein the voice data cutout apparatus starts voice data cutout from the voice data stored in the internal memory at a moment utterance of a preset vowel or consonant is started, and finishes the voice data cutout at a moment utterance of at least one phoneme is finished, and thereby cut outs unit voice data formed of a phoneme or phoneme sequence.

5. The sensitivity enhancement apparatus for chaos theoretical diagnosis according to claim 1, wherein the voice data cutout apparatus comprises a phoneme discrimination section for arbitrarily selecting and setting a phoneme or phoneme sequence, and cuts out unit voice data formed of a phoneme or phoneme sequence that coincides with a specific phoneme or phoneme sequence set by the phoneme discrimination section, from the voice data stored in the internal memory.

6. The sensitivity enhancement apparatus for chaos theoretical diagnosis according to claim 4 or 5, wherein the voice data cutout apparatus comprises offset providing means capable of providing a cutout start moment and a cutout end moment with an offset value equal to one phoneme or less, and when cutting out unit voice data formed of a phoneme or phoneme sequence from

the voice data stored in the internal memory, the cutout start moment and the cutout end moment can be adjusted by the offset providing means.